

ENERGY TRANSFORMATIONS.

- p.125 #2
- (a) BONFIRE \rightarrow RADIANT (THERMAL, LIGHT) ENERGY
 - (b) MOVING BASEBALL \rightarrow KINETIC + GRAV. POT. ENERGY
 - (c) SOLAR COLLECTOR \rightarrow THERMAL ENERGY
 - (d) STRETCHED RUBBER BAND \rightarrow ELASTIC POTENTIAL ENERGY
 - (e) SIREN \rightarrow SOUND ENERGY

p.126 #3

(a) FIREWORKS \rightarrow CHEM E. \rightarrow KINETIC \rightarrow GRAV. \rightarrow KINETIC
 \rightarrow LIGHT / HEAT

(b) BOW \rightarrow ELASTIC \rightarrow KINETIC \rightarrow GRAV.

(c) DRIVEWAY \rightarrow SOLAR \rightarrow THERMAL

(d) AXE \rightarrow CHEMICAL \rightarrow KINETIC \rightarrow GRAV \rightarrow KINETIC \rightarrow SOUND, HEAT, Ek
 (upon splitting log)

(e) LAWN \rightarrow CHEMICAL \rightarrow MECHANICAL \rightarrow KINETIC
 \rightarrow SOUND
 \rightarrow THERMAL

E_g

p.133 #1 a) REL. TO DESK

$$E_g = 0 \text{ J}$$

b) REL. TO FLOOR

$$E_g = mgh = (0.485)(9.8)(0.62) = \underline{\hspace{2cm}} \text{ J}$$

#4 $m = 72 \text{ kg}$

$$E_g = 920000 \text{ J}$$

$$h = ?$$

$$E_g = mgh$$

$$920000 = 72(9.8)h$$

$$h =$$

$$\text{Elevation} = h + 350 \text{ m}$$

#5 $E_g = 620000 \text{ J}$

$$h = 4.2 \text{ m}$$

$$m = ?$$

$$E_g = mgh$$

$$620000 = m(9.8)(4.2)$$

$$m = \underline{\hspace{2cm}}$$